WHAT IS CLAIMED IS:

1. An apparatus operable in a wet environment for controlling the brightness and color of a solid state light emitting diode, lamp assembly which is adapted to be coupled to an AC source for supplying an AC signal, comprising:

a solid state lamp assembly comprising a grouping of at least three different color light emitting diodes;

a plurality of switching devices connected in series with the lamp assembly, light emitting diodes, the switching devices being operative in either a first state wherein significant current flow through the lamp assembly is prevented or a second analogue state wherein current flow through the lamp assembly is continuously variable;

user controls for providing lamp assembly brightness and color input signals;

controller means for receiving lamp assembly brightness and color input signals from the user controls, and for switching the switching devices between its first and second states in a predetermined sequence for inducing an analogue power signal to the lamp assembly; and

isolation means for electrically isolating the user controls from the AC source, wherein the isolation means includes an impedance protected, step-down transformer.

2. An apparatus as defined in claim 1, wherein the solid state lamp assembly comprises a plurality of Light emitting diodes (LED), consisting of one red LED coupled to first switching device, lone green LED coupled to a second switching device and one blue LED coupled to a third switching device.

3. An apparatus as defined in claim 1, wherein the solid state lamp assembly comprises a plurality of Light emitting diodes (LED), consisting of a plurality of red LEDs coupled to first switching device, a plurality of green LEDs coupled to a second switching device and a plurality of blue LEDs coupled to a third switching device.

4. An apparatus as defined in claim 1, wherein the solid state lamp assembly comprises a single Light emitting diode (LED), emitting a plurality of colors being, red, green and blue, including a red color control coupled to a first switching device, a green color control coupled to a second switching device and a red color control coupled to a third switching device.

5. An apparatus as defined in claim 1, wherein the switching device includes a transistor arrangement.

6. An apparatus as defined in claim 1, wherein the switching device includes a field effect transistor arrangement.

7. An apparatus as defined in claim 1, wherein the user controls comprise switches coupled to the controller means.

8. An apparatus as defined in claim 1, wherein the controller means comprises a microcontroller and digital to analogue converter.

9. An apparatus as defined in claim 1, wherein the controller means comprises a microcontroller with internally fabricated digital to analogue converter.

10. An apparatus as defined in claim 1, wherein the isolation means comprises a step-down transformer.

11. A method for controlling the brightness and color of a solid state light emitting diode, lamp assembly, in a wet environment, which is adapted to be coupled to an AC source for supplying an AC signal, comprising:

a solid state lamp assembly comprising a grouping of at least three different color light emitting diodes;

a plurality of switching devices connected in series with the lamp assembly, light emitting diodes, the switching devices being operative in either a first state wherein significant current flow through the lamp assembly is prevented or a second analogue state wherein current flow through the lamp assembly is continuously variable;

user controls for providing lamp assembly brightness and color input signals;

controller means for receiving lamp assembly brightness and color input signals from the user controls, and for switching the switching devices between its first and second states in a predetermined sequence for inducing an analogue power signal to the lamp assembly; and

isolation means for electrically isolating the user controls from the AC source, wherein the isolation means includes an impedance protected, step-down transformer;

the method comprising the steps of:

(a) detecting a user input control signal comprising lamp color and brightness data

generating a series of digital to analogue converter control variables

(b) activating pulse width modulator with control variables, enabling analogue power flow

(c) first, second and third switching device in turn enabling a grouping of red, green and blue light emitting diodes, which are series connected to their respective first, second and third switching devices.